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A CANNIBALISTIC PTEROPHRYNE.

In Fishes of North Carolina p. 400, speaking of the Mouse Fish, Smith says: "The habits of the species are known chiefly from its behavior in aquaria. The fish are cannibalistic, denuding their fellows of their fleshy appendages and fins and sometimes swallowing their smaller companions whole."

On July 2, 1915, I caught a *Pterophryne histrio* 85 mm. total length in the bight of Cape Lookout, N. C., and placed it in an aquarium aboard my yacht. It was very lively and continually moving about. After it had been in captivity about eighteen hours it was seen to disgorge a small *Pterophryne* 38 mm. in total length. I at once transferred both specimens to formalin solution.

This conclusively proves that the species does not confine its cannibalistic habit to life in captivity, as the small fish had positively been swallowed before capture.

Russell J. Coles,
Danville, Va.

A LIST OF SANTO DOMINGO FISHES.

Many years ago a collection was received at the Academy of Natural Sciences of Philadelphia, made by Prof. W. M. Gabb, at Santo Domingo, in the eastern part of the island. As this collection was

never reported, and a number of the species are additions to that little known fish-fauna, this note is offered. The additions to the fauna are indicated by the prefixed star.

Elops saurus Linn.
Albula vulpes (Linn.).
Dixonina nemoptera Fowler.
Sardinella humeralis (Valenciennes).
Opisthonema oglium (Le Sueur)
Anchovia brownii (Gmelin).
A. clupeoides (Swainson).
Synodus dominicensis Fowler.
Anguilla rostrata Le Sueur.
Muraenesox savanna (Cuvier).
Gymnothorax funebris (Ranzani).
G. ocellatus (Agassiz).
**Parexocoetus mesogaster* (Bloch).
**Tylosurus timucu* (Walbaum).
**Dorythamphus lineatus* (Valenciennes).
**Mugil curema* Valenciennes.
Agonostomus monticola (Griffith).
Joturus pichardi Poey.
Sphyraena barracuda (Walbaum),
**S. guachancho* Valenciennes.
**S. picudilla* Poey.
Scomberomorus regalis (Bloch).
S. cavalla (Cuvier).
Gempylus serpens Cuvier.
Trichiurus lepturus Linn.
Trachurops crumenopthalmus (Bloch).
Caranx hippos (Linn.).
C. pisquetus Cuvier.
C. latus Agassiz.
Blepharis crinitus (Bloch).
Vomer setipinnis (Mitchill).
Selene vomer (Linn).
Trachinotus glaucus (Bloch).
T. falcatus (Linn.).
Centropomus ensiferus Cuvier.
C. cuvieri Vaillant and Bocourt.
C. parallelus Poey.
Cephalopholis fulvus (Linn.).
C. fulvus onatalibi Valenciennes.
Epinephelus flavolimbatus Poey.
E. maculosus (Valenciennes).
Alphestes lightfooti (Fowler).
Priacanthus arenatus Cuvier.
**Lutinanus jocu* (Schneider)
L. apodus (Walbaum).
**L. buccanella* (Cuvier).
**L. vivanus* (Cuvier).
L. synagris (Linn.).
**L. mahogani* (Cuvier).
Haemulon plumieri (Lacepede).
Anisotremus surinamensis (Bloch).
**Brachydeuterus corvinaeformis* (Steindachner).
Pomadasis ramosus (Poey).
Calamus calamus (Valenciennes).
Eucinostomus gula (Valenciennes).
**E. harengulus* Goode and Bean.
Gerres rhombeus Valenciennes.
G. olisthostomus Goode and Bean.
G. plumieri Valenciennes.
Odontoscion dentex (Cuvier).
Bairdiella ronchus (Cuvier).
**Micropogon furnieri* (Desmarest).
Umbrina coroides Valenciennes.
**Corvula subaequalis* (Poey).
Polydactylus virginicus (Linn.).
**Eupomacentrus fuscus* (Valenciennes).
**E. otophorus* (Poey).
**Iridio poeyi* (Steindachner).
Chaetodipterus faber (Broussonet).
**Hepatus bahianus* (Castelnau).
Lactophrys tricornis (Linn.).
**L. triqueter* (Linn.).
Spheroides testudineus (Linn.).
**Scorpaena plumieri* Bloch.
Philypnus dormitor (Lacepede).
Eleotris pisonis (Gmelin).
Awaous taiasica (Lichtenstein).
Leptecheneis naucrates (Linn.).
Caulolatilus chrysops (Valenciennes).
**Labrisomus nuchipinnis* (Quoy and Gaimard).
Citharichthys spilopterus Gunther.
**Achirus lineatus* (Linn.).

HENRY W. FOWLER,
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NOTES ON THE FAUNA ABOUT THE HEADWATERS OF THE ALLEGHENY, GENESEE AND SUSQUEHANNA RIVERS IN PENNSYLVANIA.

During early June of 1906, the following fishes were found in a tributary of the Allegheny near Port Allegheny, in McKean County:

Campostoma anomalum, Pimephales notatus, Semotilus atromaculatus, Rhinichthys atronasus, Hybopsis kentuckiensis, Catostomus commersonnii, Boleosoma nigrun and *Etheostoma flabellare.*

The broad valley of this section offers more varied conditions than the upper headwaters, which are but small mountain brooks. *Plethodon erythronotus, P. glutinosus, Desmognathus fusca,* both forms of *Diemictylus viridescens, Bufo americanus, Hyla pickeringii, Rana palustris, R. clamata, R. catesbeiana, R. sylvatica* and *Thamnophis sirtalis* were also found. *Cryptobranchus alleganiensis* was reported to occur abundantly sometimes, though not met with on this trip.

In the summer of 1904, *Gyrinophilus porphyriticus, Spelerpes bislineatus, Plethodon erythronotus, Desmognathus fusca, Diemictylus viridescens, Bufo americanus, Rana palustris, R. clamata, R. catesbeiana* and *R. sylvatica* were found. All of these amphibians are typical of the hemlock forests.

In the headwaters of the Genesee in Potter Co. the following were found in June of 1906: *Salvelinus fontinalis, Semotilus atromaculatus, Rhinichthys atronasus, Catostomus commersonnii, Erimyzon sucetta oblongus, Amciurus nebulosus Schilbeodes gyrinus* and *Cottus gracilis.* Only *Salvelinus* and *Rhinichthys* were found in the very small brooks or rills, and this was also true of those in the Allegheny and Susquehanna drainages. The Genesee *Rhinichthys* was very dark, inclining largely to a dusky or black-

ish color. Though some examples had a pale area in place of the usual dark lateral band, that of the breeding male varied from a dull dark red to a deep wine color on the trunk. Many had the lower sides of their bodies variegated with dusky and the tops of their heads finely granular. *Desmognathus fusca* occurs very abundantly and some few examples of *Plethodon erythronotus* were found, though the latter did not appear to be so abundant as in the hemlock forests near Port Allegheny. Though *P. glutinosus* was not found at Gold Potter County it was met with in the Allegheny Valley at Seven Bridges. Other species about Gold were *Diemictylus viridescens, Bufo americanus, Hyla pickeringii, Acris gryllus crepitans, Rana palustris, R. clamata, R. sylvatica* and *Lampropeltis doliatus triangulus, Liopeltis vernalis* and *Sternothaerus odoratus* were reported though not met with.

The smaller headwaters in the Allegheny and Susquehanna valleys offered the same meagre fish-fauna as the Genesee and about the only fish were *Salvelinus fontinalis* and *Rhinichthys atronasus.* Near Brooklyn in Potter Co. *Spelerpes bislineatus* was found and near Kilburne *Natrix sipedon.*

The writer, in company with H. W. Fowler, spent their vacations for three years in the places mentioned. Thinking the Geographical distribution of the species listed proving of possible interest, they are herewith presented.

THOMAS D. KEIM,
Stelton, N. J.

LATE-BREEDING SPADE-FOOT TOADS, ETC.

On the evening of August 4, 1915, enormous numbers of Spadefoot Toads, (*Scaphiopus holbrooki*) appeared in Patchogue, Yaphank, Middle Island and Coram. I made a twenty-five mile circuit through the villages named, and found the toads in

practically every pool. There had been an extremely hard rain during the two previous days. Fowler's toads, (*Bufo fowleri*) common tree toads. (*Hyla versicolor*) and green frogs, (*Rana clamitans*) were also abundant. All the various kinds were in full song. On the next day enormous numbers of eggs of the spade foot and Fowler's toads were readily identified in the pools. On the 7th, the eggs were hatched, and on the fourteenth the young were almost half grown. Fully formed spade foot toads were found in Coram on September 4.

On the afternoon of September 12, Leopard Frogs, (*Rana pipiens*) were singing on the salt marshes near the Forge Life Saving Station.

FRANK OVERTON,
Patchogue, N. Y.

AN ALBINO POND FROG.

In the Reptile House at the N. Y. Zoological Park there is on exhibition an albino specimen of the common Pond Frog, *Rana clamitans*. The creature was caught by Henry, the young son of Chas. E. Snyder, head keeper at the park, in a pond near his home in Scarsdale, N. Y.

The color is rich lemon yellow above, white below, and on the hind limbs can be seen faint traces of cross bands. The pupil and iris of the eye are pink, as in albino rats and rabbits. There is, however, a fine golden line bordering the pupil.

The frog feeds well, but seems to see insects which move above it, much quicker than those on a level with itself.

It is a female, about two-thirds grown, the length from snout to vent being 2½ inches. The only other record of albino specimens of the order Salientia in the United States, that the writer has knowledge of, is that of some tadpoles of the common toad, *Bufo americanus,* reared from colorless spawn by

Prof. Morgan, of Columbia University. The tadpoles gradually acquired the normal coloration of the species. Another albino amphibian record is that of a specimen of the two-lined Salamander, *Spelerpes bilineatus* described by A. M. Banta and R. A. Gortner in Proc. U. S. Nat. Mus. vol. 49, p. 377, pl. 54-55.

Other amphibians showing albinism are:

Edible Frog *Rana esculenta* of Europe, larvae.

Grass Frog *R. temporaria* of Europe, larvae and adults.

Yellow Bell toad *Bombinator pachypus* of Europe, one adult.

Green Toad *Bufo viridis* of Europe, one larva.

Midwife Toad *Alytes obstetricans* of Europe, larvae and adults.

RICHARD F. DECKERT,
New York, N. Y.

ON A SMALL COLLECTION OF FROGS AND TOADS OF THE DISTRICT OF COLUMBIA.

For the purpose of making a closer study of the *Anura* of Washington, D. C., and vicinity, I have started a small collection of these interesting "varmints," which are temporarily being kept in the office of Mr. R. G. Paine, of the Division of Reptiles, U. S. National Museum. My sincere thanks are due to Mr. Paine, one of the best known herpetologists of Washington, for his kindness in permitting a "neophite" like myself to impose on his time and good nature. But then you know he is a "crank" on the subject, himself.

In collecting I have also had the assistance of Mr. H. A. O'Dwyer, whose sharpness of vision and quickness of limb have been, and, I trust, will be in the future of great benefit to our undertaking.

Experience so far seems to prove that *Bufo fowleri* is the more common toad in this vicinity, sev-

eral specimens having been found on the farm of my friend, Mr. William Palmer, in Alexandria County, near Arlington Cemetery, Virginia. Mr. Palmer's farm, like the entire district, seems to abound in this species, whereas but one very small and young *B. americanus,* from North Chesapeake Beach, (and this rather doubtful), has thus far been added to the collection.

Two pickerel frogs, (*Rana palustris*), were caught by Mr. O'Dwyer and myself along the Chesapeake and Ohio Canal, above the Aqueduct Bridge, between the Chain-bridge and Georgetown, on the evening of August 30, 1915. Abundant rains had soaked the entire region and made the finding of frogs a "regular picnic." Several young specimens of *R. clamitans,* which, by the way, appears to be very abundant in this neighborhood, were also caught, as well as a young specimen of *R. pipiens,* easily recognizable by its round, brownish, dorsal spots and its sharp snout.

A specimen of *Hyla versicolor* was picked up by Mr. Palmer from the bottom of his well, whither the tree-toad had jumped or fallen after the superstructure had been removed in order to make way for a pump of more modern type. Efforts will shortly be made to secure specimens of *Hyla evittata* Miller, which are said to be very numerous in the ponds between Mr. Palmer's farm and the Potomac River, and also to establish whether *Hyla cinerea* co-exists with, or is not, as some claim, specifically identical with *H. evittata.*

Some doubt seems to exist as to the exact species of a small frog resembling *clamitans,* but with the back of a rich brown or chocolate color, and with a beautiful streak of lazuli blue on the edge of the upper jaw from the tympanum to the tip of the snout. Can any reader of COPEIA help us out?

S. M. GRONBERGER,
Washington, D. C.

ADDITIONAL RECORDS OF THE TIGER SALAMANDER IN CALIFORNIA.

Records of the Tiger Salamander (*Ambystoma tigrinum*) in California are so few that it seems desirable to make brief mention of some specimens in the collections of the University of California. A specimen from Mount Hamilton, Santa Clara County, (no date), taken by A. W. Crawford, and one from Ripon, San Joaquin County, taken April 6, 1912, by Louis Vistica, are in the collection of the Department of Zoology. A specimen from Galt, Sacramento County, was taken December 31, 1914, by W. H. Noble, and is now No. 5562 in the reptile and amphibian collection of the California Museum of Vertebrate Zoology. All three seem referable to the western sub-species namely *Ambystoma tigrinum californiense* Gray.

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PRICE FIVE CENTS